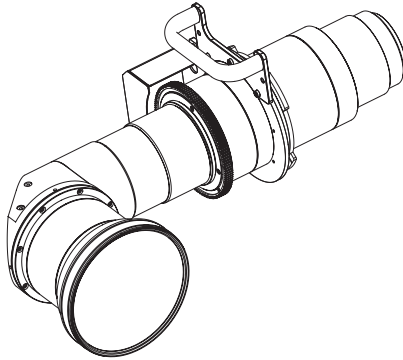


# Panasonic®

## Operating Instructions

Zoom lens **Commercial Use**

Model No. **ET-D3QW200**



ENGLISH

FRANÇAIS

日本語

Thank you for purchasing this Panasonic product.

- To ensure correct use of this lens, please read the operating instructions supplied with the lens and the projector carefully.
- **Before using this product, be sure to read “Read this first!” (▶Page 3).**
- Please save this manual for future use.

# Contents

<b>Read this first!</b> .....	<b>3</b>
<b>Before Use</b> .....	<b>5</b>
<b>Preparation</b> .....	<b>5</b>
Before replacing the projection lens .....	5
Attaching and Detaching the Lens .....	5
Peripheral focus adjustment function .....	6
Lens calibration .....	7
<b>Projection relationships</b> .....	<b>8</b>
<b>Lens shift ranges</b> .....	<b>12</b>
<b>Specifications</b> .....	<b>13</b>
<b>Dimensions</b> .....	<b>13</b>
<b>Projected image size and Projection distance</b> .....	<b>Appendix / Annexe / 付録 1</b>
The "Appendix" can be found after the Japanese language section ( <b>日本語</b> ).	

## **WARNING:**

**Do not look at or place your skin into the light emitted from the lens while the projector is being used.**

Doing so can cause burns or loss of sight.

- Strong light is emitted from the projector's lens. Do not look at or place your hands directly into this light.
- Turn off the power when moving away from the projection lens or projector.

**Do not project an image with the lens cover attached.**

- Doing so can cause fire.

## **CAUTION:**

**Before replacing the projection lens, be sure to turn off the power and disconnect the power plug from the wall outlet.**

- Unexpected projection of light may cause injury to eyes.
- Replacing the projection lens without removing the power plug may result in electric shock.

**Do not stand in front of the lens while the projector is being used.**

Doing so can cause damage and burns to clothing.

- Strong light is emitted from the projector's lens.

**Do not place objects in front of the lens while the projector is being used.**

Doing so can cause fire, damage to the object, or malfunction of the lens and projector.

- Strong light is emitted from the projector's lens.

**Do not open the desiccant bag. Do not eat the contents.**

Inadvertently ingesting desiccant could be harmful.

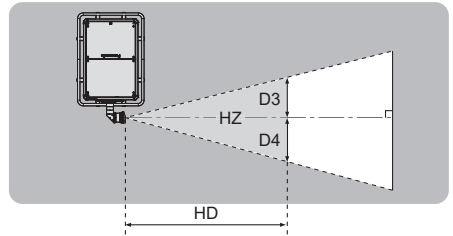
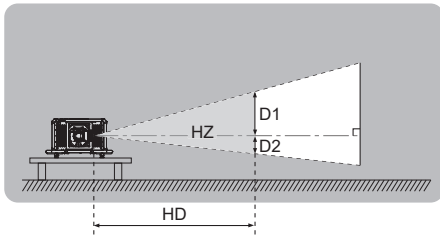
- If the desiccant gets into your eyes or mouth, immediately rinse with plenty of water and seek medical attention.
- Keep desiccant out of the reach of children.

## Read this first! (continued)

### ■ Hazard distance (IEC 62471-5:2015)

The distance from the projection lens surface, at which the emission reaches the Accessible Emission Limit (AEL) of risk group 2, is known as the hazard distance (HD) or safety distance. The area where the emission exceeds the Accessible Emission Limit of risk group 2 is called the hazard zone (HZ).

Within the hazard zone, never look into the light projected from the projector. The eyes may be damaged by direct irradiation even if you look at the light just for a moment. If you are outside the hazard zone, it is considered to be safe in all circumstances except deliberately staring into the light projected from the projector.



### ■ Risk group

The combination of the projector and the projection lens is categorized as risk group 2 when the hazard distance is 1 m (39-3/8") or less. It is categorized as risk group 3 when the hazard distance exceeds 1 m (39-3/8"), and it will be for professional use instead of consumer use.

In case of risk group 3, there is a possibility of damaging the eyes by direct irradiation when looking into the projection light from inside the hazard zone even for a moment.

In the case of risk group 2, safe use without damaging the eyes is possible in all circumstances except deliberately staring into the light projected from the projector.

The risk group for the combination of the projection lens and a compatible projector is as follows.

Projector model	Risk group
PT-RQ50K	Risk group 2

# Before Use

This zoom lens is a projection lens equipped with an EEPROM<sup>\*1</sup> and stepping motor.

\*1 EEPROM: Electrically erasable programmable read-only memory

## Supported projectors

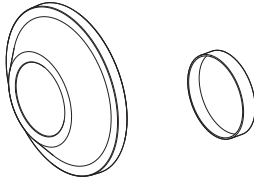
PT-RQ50K

### Note

- Some of the alphabet letters at the end of projector model numbers may be omitted in this manual.
- Models other than the above may also be supported. Refer to the operating instructions for your projector or the Panasonic website (<https://panasonic.net/cns/projector/>).

## Supplied Accessories

Make sure that the following has been provided.

Part name	Appearance
Lens cover	 <ul style="list-style-type: none"><li>● The product is delivered with a lens cover attached.</li></ul> <p>1 each for front and rear</p>

# Preparation

## Before replacing the projection lens

Return the projection lens to the home position before replacing or removing it.

For details on how to return the lens to the home position, refer to the operating instructions of the projector.

### Attention

- Make sure that the projector power supply is switched off before attaching or detaching the projection lens.
- After removing the projection lens, store it safely away from vibration or impacts.
- Do not touch the electrical contacts of the projection lens with your fingers. Dust and dirt on the contacts may cause contact malfunctions, while static electricity may damage the unit.
- Do not touch the surface of the lens with bare hands. Finger prints and dirt on the surface of the lens will be magnified by the lens and lower the quality of the projected image. Place the supplied lens cover on the zoom lens when the projector is not in use.
- The lens is made of glass. The lens could be damaged if brought into contact with or rubbed against hard objects. Handle the lens carefully.
- Use a clean, soft and dry cloth to wipe away dust and dirt from the projection lens. Do not use fluffy cloths containing oil, water or dust for cleaning. The lens is easily damaged, so do not apply excessive pressure when wiping it.

## Attaching and Detaching the Lens

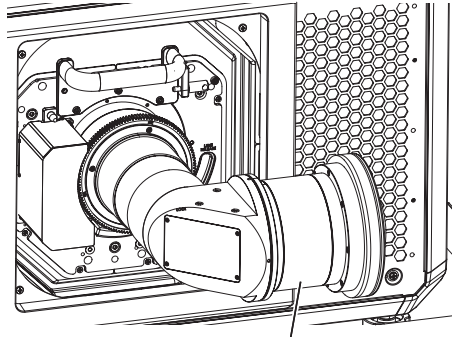
For details on attaching and detaching the projection lens, refer to the operating instructions of the projector.

## Preparation (continued)

### Peripheral focus adjustment function

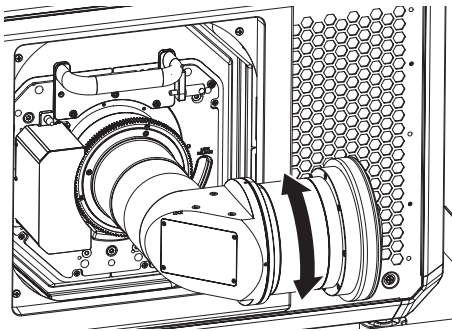
When you change the size of the projected image, the focal balance between the center and peripheral areas of the screen may shift. This shift in balance tends to increase proportionally with smaller throw ratios.

The ET-D3QW200 is equipped with a peripheral focus adjustment function to correct the shift in focal balance between the center and peripheral areas of the screen.



Peripheral focus adjustment ring

### ■ Adjusting the focus



- 1) Turn the peripheral focus adjustment ring in the direction of the arrow to match the projection distance displayed on the lens to the actual distance from the lens to the screen.
- 2) Operate the projector to align the focus of the center of the projected image.

### Note

- The projection distances displayed on the lens are approximate guides.
- The lens focus is not stable immediately after powering on due to the affect of heat produced by the light from the light source.  
It is recommended that the focus be adjusted after the image has been projected for approximately 1 hour.

# Preparation (continued)

## Lens calibration

Perform lens calibration after attaching the lens.

PROJECTOR SETUP	1/2
PROJECTOR ID	ALL
PROJECTION METHOD	
LENS	
OPERATION SETTING	NORMAL
LIGHT OUTPUT	100.0%
BRIGHTNESS CONTROL	AUTO
NO SIGNAL SETTING	
INITIAL STARTUP	LAST MEMORY
STARTUP INPUT SELECT	LAST USED
DATE AND TIME	
SCHEDULE	OFF
MULTI PROJECTOR SYNC	
▲ MENU SELECT	
▶ SUB MENU	

LENS
LENS INFORMATION SETTING
LENS MEMORY
LENS HOME POSITION
ACTIVE FOCUS OPTIMIZER
LENS CALIBRATION
▲ MENU SELECT
▶ SUB MENU

LENS CALIBRATION : ET-D3QW200
SHIFT/FOCUS/ZOOM
SHIFT/FOCUS
ZOOM
▲ MENU SELECT
▶ EXECUTE

LENS CALIBRATION : ET-D3QW200	
Proceed LENS CALIBRATION, and return to HOME POSITION.	
OK	CANCEL
◀ CHANGE	
▶ EXECUTE	

- 1) Press the <MENU> button.
- 2) Use the ▲ and ▼ buttons to select [PROJECTOR SETUP], and press the <ENTER> button.
  - The [PROJECTOR SETUP] screen appears.
- 3) Use the ▲ and ▼ buttons to select [LENS], and press the <ENTER> button.
  - The [LENS] screen appears.
- 4) Use the ▲ and ▼ buttons to select [LENS CALIBRATION], and press the <ENTER> button.
  - The [LENS CALIBRATION] screen appears.
- 5) Use the ▲ and ▼ buttons to select [SHIFT/FOCUS/ZOOM], and press the <ENTER> button.
  - The confirmation screen appears.
- 6) Use the ◀ and ▶ buttons to select [OK], and press the <ENTER> button.
  - Lens calibration starts.
  - The projection lens moves to the home position after adjustment range calibration is complete.

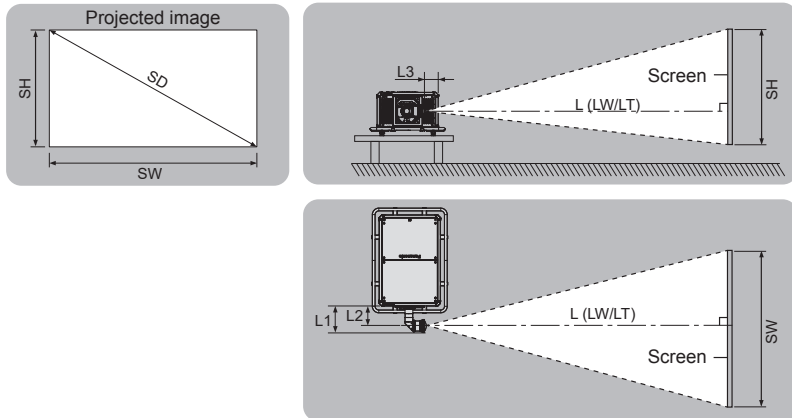
### Note

- If lens calibration is not performed, the available zoom range will be narrowed.

# Projection relationships

The dimensional relationship between the screen and the projector is shown below.

## Dimensional relationship diagram



### Note

- This diagram assumes that the size and position of the projected image will be adjusted so that the image fills the entire screen.
- This illustration is not drawn to scale.

	L	Projection distance
	LW	Minimum distance
	LT	Maximum distance
L1	Lens protrusion dimension (distance from the front surface of the projector to the forward end of the projection lens)	
L2	Position of the lens optical axis (distance from the front surface of the projector to the lens optical axis)	
L3	Position of the lens apex (distance from the side of the projector to the lens apex)	
SH	Projected image height	
SW	Projected image width	
SD	Projected image size	

### Dimensions for L1, L2, and L3 (approximate values)

(Unit: m)

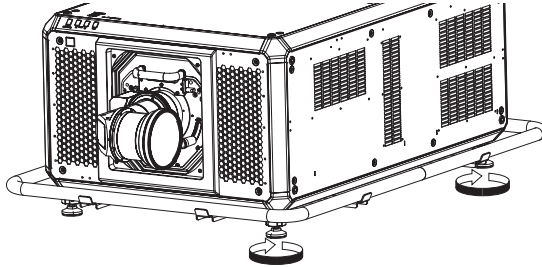
Projector model	L1	L2	L3
PT-RQ50K	0.31	0.24	0.17



## Projection relationships (continued)

### Note

- The illustrations of projectors in this manual are for informational purposes only and do not represent a specific projector model. Configurations may vary with the model.
- If the screen is tilted downward, extend the adjustable feet on the sides of the projector until the projected image is rectangular.  
If the projector is inclined horizontally, adjust the adjustable feet until the projector is level.  
You can extend the adjustable feet by turning them as shown in the diagram. To return the feet to the original position, turn them in the opposite direction.



### Attention

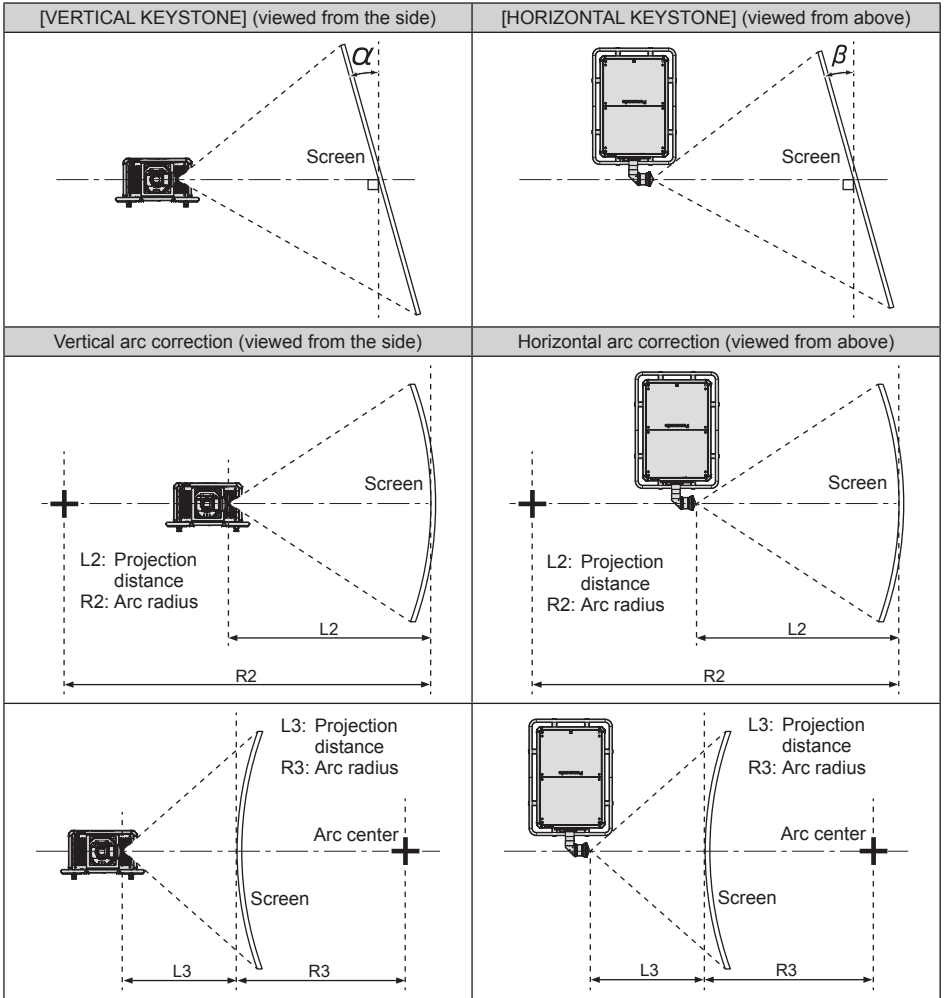
- To prevent obstruction of the intake and exhaust vents, install the projector with a clearance at least 500 mm (1 ft. 7 in.) from walls and objects.  
If you are installing the projector in a sealed space, be sure to provide additional air conditioning equipment and ventilation equipment. Insufficient ventilation will result in an accumulation of heat and may activate the projector's protection circuit.
- Avoid setting up in places which are subject to sudden temperature changes, such as near an air conditioner or lighting equipment (studio lamps, etc.).

### ■ Dimensional relationship

For details on the projection distance (L), refer to "Projected image size and Projection distance" and "Projection distance formulas" in the Appendix.

# Projection relationships (continued)

## ■ [GEOMETRY] projection range



Projector model	Only [KEYSTONE] used		[KEYSTONE] and [CURVED CORRECTION] used together				Only [CURVED CORRECTION] used	
	Vertical keystone correction angle $\alpha$ (°)	Horizontal keystone correction angle $\beta$ (°)	Vertical keystone correction angle $\alpha$ (°)	Horizontal keystone correction angle $\beta$ (°)	Min. value of R2/L2	Min. value of R3/L3	Min. value of R2/L2	Min. value of R3/L3
PT-RQ50K	±15	±5	-	-	-	-	-	-

## Projection relationships (continued)

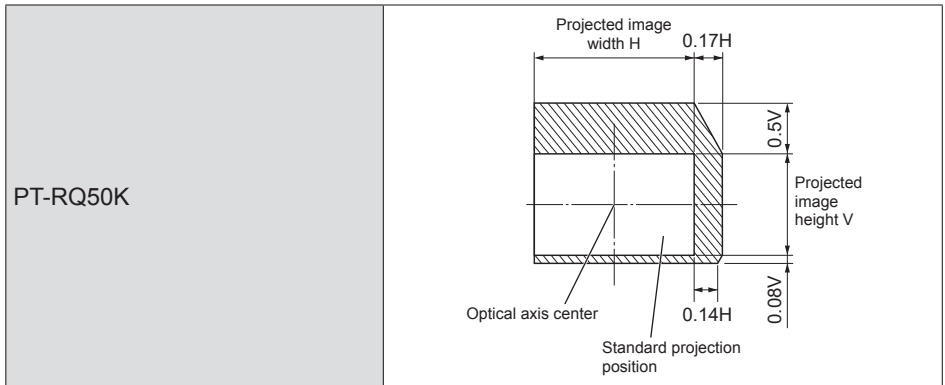
### Note

- When [GEOMETRY] is used, the focus of the entire screen may be lost as correction increases.
- Adjustment range of the [GEOMETRY] items may not match the listed projection range depending on the projection lens. Use this projector within the projection range, otherwise the correction may not work.
- The geometric adjustment function cannot be used when the video signal in simultaneous format or the video signal with vertical scanning frequency of 100 Hz or 120 Hz is input. When projecting an image in simultaneous format or an image with vertical scanning frequency of 100 Hz or 120 Hz, install the projector following the instructions below so that distortion does not occur in the projected image.
  - Use a flat screen.
  - Install the projector so that the front side of the projector is parallel to the screen.
  - Install the projector so that the image can be projected within the lens shift adjustment range.

# Lens shift ranges

After moving the lens to the home position according to “Lens calibration” on page 7, you can use the lens shift adjustment function on the projector to adjust the position of the projected image within the respective lens shift ranges based on the optical screen center position (standard projection position). The optical screen center position is the screen position using the optical center of the projector as the base.

Perform lens shift adjustment within the ranges shown in the following illustrations. Moving the lens outside of the adjustment ranges may alter the focus. This occurs due to limitations in lens movement that are intended to protect the optical components. The following illustrations depict lens shift ranges for floor installations of the projector.



## Note

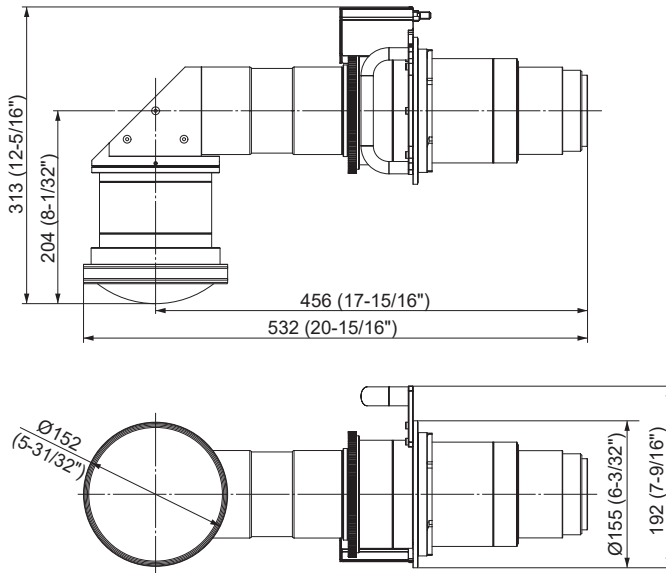
- The home position of the projector a point of origin position for the lens shift (i.e., vertical and horizontal positions of the lens) based on the results of lens calibration. It is not the optical center position of the screen.

# Specifications

F value	2.5
Focal Length (f)	17.5 mm (11/16") - 20.7 mm (13/16")
Supported screen size	100" - 1500"
Dimensions	Width 313 mm (12-5/16") Height 192 mm (7-9/16") Depth 532 mm (20-15/16")
Net Weight	11.3 kg (24.9 lb)

# Dimensions

(Unit: mm)



### Information for users in the European Union

Importer's name and address within the European Union  
Panasonic Marketing Europe GmbH  
Panasonic Testing Centre  
Winsbergring 15, 22525 Hamburg, Germany

### Disposal of Old Equipment

#### Only for European Union and countries with recycling systems



This symbol on the products, packaging, and/or accompanying documents means that used electrical and electronic products must not be mixed with general household waste. For proper treatment, recovery and recycling of old products, please take them to applicable collection points in accordance with your national legislation.

By disposing of them correctly, you will help to save valuable resources and prevent any potential negative effects on human health and the environment.

For more information about collection and recycling, please contact your local municipality. Penalties may be applicable for incorrect disposal of this waste, in accordance with national legislation.

### Information on Disposal in other Countries outside the European Union

This symbol is only valid in the European Union.

If you wish to discard this product, please contact your local authorities or dealer and ask for the correct method of disposal.

### Product Information (for Turkey only)



AEEE Yönetmeliğine Uygundur.

Eski Ekipman ve Bataryaların İşlenmesi.

Sadece geri dönüşüm sistemleri olan Avrupa Birliği ve ülkeleri için geçerlidir.

Ürünler, ambalaj ve/veya ekli belgeler üzerindeki bu semboller kullanılmış elektrik ve elektronik ürünlerin genel ev atığı ile karıştırılmaması gerektiğini ifade eder.

Eski ürünlerin toplanması ve geri kazanılması için bu atıklar lütfen yasayla belirlenmiş olan uygun toplama merkezlerine teslim ediniz.

Bu atıkların doğru işlenmesiyle, değerli kaynakların korunmasına ve insan sağlığı ve çevreye olası negatif etkilerinin engellenmesine yardımcı olabilirsiniz.

Atıkların toplanması ve geri dönüşümü için detaylı bilgi için lütfen bağlı olduğunuz yerel yönetimlerle iletişime geçiniz.

Atıkların atılmasıyla ilgili yanlış uygulamalar yasayla belirlenmiş olan cezalara sebebiyet verebilir.

### Environment care information for users in China



This symbol is only valid in China.

# Panasonic Corporation

Web Site : <https://panasonic.net/cns/projector/>

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HS0621AM0 -PS

Printed in Japan

# Appendix / Annexe / 付録

- Projected image size and Projection distance
- Taille de l'image projetée et Distance de projection
- 投写画面サイズと投写距離

(Unit / Unités / 単位 : m)

When the screen aspect ratio is 17:9 (Throw ratio: [0.548 - 0.650:1])  
Lorsque le rapport d'aspect de l'écran est 17:9 (Rapport de projection : [0.548 - 0.650:1])  
アスペクト比 17:9 (スローレシオ : [0.548 - 0.650:1])

SD	SH	SW	LW	LT
2.54 (100")	1.188	2.245	1.19	1.42
3.05 (120")	1.426	2.694	1.44	1.72
3.81 (150")	1.783	3.367	1.82	2.17
5.08 (200")	2.377	4.490	2.46	2.92
6.35 (250")	2.971	5.612	3.10	3.67
7.62 (300")	3.565	6.734	3.73	4.42
8.89 (350")	4.160	7.857	4.37	5.17
10.16 (400")	4.754	8.979	5.00	5.92
12.70 (500")	5.942	11.224	6.27	7.42
15.24 (600")	7.131	13.469	7.54	8.92
17.78 (700")	8.319	15.714	8.82	10.42
20.32 (800")	9.507	17.959	10.09	11.93
22.86 (900")	10.696	20.203	11.36	13.43
25.40 (1000")	11.884	22.448	12.63	14.93
27.94 (1100")	13.073	24.693	13.90	16.43
30.48 (1200")	14.261	26.938	15.17	17.93
33.02 (1300")	15.450	29.183	16.44	19.43
35.56 (1400")	16.638	31.427	17.71	20.93
38.10 (1500")	17.827	33.672	18.98	22.43

# Appendix / Annexe / 付録 (continued / suite / つづき)

(Unit / Unités / 単位 : m)

When the screen aspect ratio is 16:10 (Throw ratio: [0.652 - 0.772:1])				
Lorsque le rapport d'aspect de l'écran est 16:10 (Rapport de projection : [0.652 - 0.772:1])				
アスペクト比 16:10 (スローレシオ : [0.652 - 0.772:1])				
SD	SH	SW	LW	LT
2.54 (100")	1.346	2.154	1.36	1.62
3.05 (120")	1.615	2.585	1.65	1.96
3.81 (150")	2.019	3.231	2.08	2.48
5.08 (200")	2.692	4.308	2.81	3.33
6.35 (250")	3.365	5.385	3.53	4.18
7.62 (300")	4.039	6.462	4.25	5.03
8.89 (350")	4.712	7.539	4.97	5.89
10.16 (400")	5.385	8.616	5.69	6.74
12.70 (500")	6.731	10.770	7.14	8.44
15.24 (600")	8.077	12.923	8.58	10.15
17.78 (700")	9.423	15.077	10.03	11.86
20.32 (800")	10.770	17.231	11.47	13.56
22.86 (900")	12.116	19.385	12.92	15.27
25.40 (1000")	13.462	21.539	14.36	16.97
27.94 (1100")	14.808	23.693	15.80	18.68
30.48 (1200")	16.154	25.847	17.25	20.38
33.02 (1300")	17.501	28.001	18.69	22.09
35.56 (1400")	18.847	30.155	20.14	23.79
38.10 (1500")	20.193	32.309	21.58	25.50

(Unit / Unités / 単位 : m)

When the screen aspect ratio is 16:9 (Throw ratio: [0.585 - 0.693:1])				
Lorsque le rapport d'aspect de l'écran est 16:9 (Rapport de projection : [0.585 - 0.693:1])				
アスペクト比 16:9 (スローレシオ : [0.585 - 0.693:1])				
SD	SH	SW	LW	LT
2.54 (100")	1.245	2.214	1.25	1.49
3.05 (120")	1.494	2.657	1.52	1.81
3.81 (150")	1.868	3.321	1.92	2.28
5.08 (200")	2.491	4.428	2.59	3.07
6.35 (250")	3.113	5.535	3.26	3.86
7.62 (300")	3.736	6.641	3.93	4.65
8.89 (350")	4.358	7.748	4.59	5.44
10.16 (400")	4.981	8.855	5.26	6.23
12.70 (500")	6.226	11.069	6.60	7.81
15.24 (600")	7.472	13.283	7.93	9.38
17.78 (700")	8.717	15.497	9.27	10.96
20.32 (800")	9.962	17.710	10.60	12.54
22.86 (900")	11.207	19.924	11.94	14.12
25.40 (1000")	12.453	22.138	13.28	15.69
27.94 (1100")	13.698	24.352	14.61	17.27
30.48 (1200")	14.943	26.566	15.95	18.85
33.02 (1300")	16.188	28.779	17.28	20.43
35.56 (1400")	17.434	30.993	18.62	22.00
38.10 (1500")	18.679	33.207	19.96	23.58



# Appendix / Annexe / 付録 (continued / suite / つづき)

(Unit / Unités / 単位 : m)

When the screen aspect ratio is 4:3 (Throw ratio: [0.785 - 0.929:1])  
 Lorsque le rapport d'aspect de l'écran est 4:3 (Rapport de projection : [0.785 - 0.929:1])  
 アスペクト比 4:3 (スローレシオ : [0.785 - 0.929:1])

SD	SH	SW	LW	LT
2.54 (100")	1.524	2.032	1.55	1.85
3.05 (120")	1.829	2.438	1.88	2.23
3.81 (150")	2.286	3.048	2.37	2.81
5.08 (200")	3.048	4.064	3.19	3.78
6.35 (250")	3.810	5.080	4.01	4.74
7.62 (300")	4.572	6.096	4.82	5.71
8.89 (350")	5.334	7.112	5.64	6.67
10.16 (400")	6.096	8.128	6.46	7.64
12.70 (500")	7.620	10.160	8.09	9.57
15.24 (600")	9.144	12.192	9.73	11.50
17.78 (700")	10.668	14.224	11.36	13.43
20.32 (800")	12.192	16.256	13.00	15.36
22.86 (900")	13.716	18.288	14.63	17.29
25.40 (1000")	15.240	20.320	16.27	19.22
27.94 (1100")	16.764	22.352	17.90	21.16
30.48 (1200")	18.288	24.384	19.54	23.09
33.02 (1300")	19.812	26.416	21.17	25.02
35.56 (1400")	21.336	28.448	22.81	26.95
38.10 (1500")	22.860	30.480	24.44	28.88

## Note

- A  $\pm 5\%$  error in listed projection distances may occur.  
In addition, when [KEYSTONE] is used, distance is corrected to become smaller than the specified screen size.
- The throw ratio is based on the value during projection with the projected image size of 5.08 m (200").
- The periods used in the numbers in the tables are decimal points.

## Remarque

- Une erreur de  $\pm 5\%$  dans des distances de projection énumérées peut se produire.  
En outre, lorsque [CORRECTION DE TRAPÈZE] est utilisé, la distance est corrigée pour devenir inférieure à la taille d'écran spécifiée.
- Le rapport de projection est basé sur la valeur en cours de projection avec une taille de l'image projetée de 5,08 m (200").
- Les points utilisés dans les nombres dans les tableaux sont des points décimaux.

## お知らせ

- 記載の投写距離は  $\pm 5\%$ 以下の範囲内で誤差が発生します。  
また、[台形補正] 使用時は、所定の画面サイズよりも小さくなる方向で補正されます。
- スローレシオは、投写画面サイズ 200 型投写時の値を基準にしています。

Setting-up dimensions which are not given in the above table can be calculated using the formulas below. Check the projected image size SD (m) and use the following formula to determine projection distance (L).

La configuration des dimensions qui ne sont pas données dans le tableau ci-dessus peut être calculée à l'aide des formules suivantes. Vérifiez la taille de l'image projetée SD (m) et utilisez la formule suivante pour déterminer la distance de projection (L).

上記の表以外の投写寸法は次の計算式で求めることができます。画面対角サイズ SD (m) をご確認のうえ、それぞれの計算式で投写距離 (L) を求めてください。

## Appendix / Annexe / 付録 (continued / suite / つづき)

- Projection distance formulas
- Formules de distance de projection
- 投写距離計算式

The dimensions of the following table contain a slight error.

Periods are used to represent decimal points in the calculation formulas in the following table.

Les dimensions du tableau suivant peuvent présenter un léger écart.

Les points sont utilisés pour indiquer les décimales dans les formules de calcul dans le tableau suivant.

次の表内の寸法は若干の誤差があります。

(Unit / Unités / 単位 : m)

	L	
	LW	LT
When the screen aspect ratio is 17:9 Lorsque le rapport d'aspect de l'écran est 17:9 画面アスペクト比 17:9 のとき	=0.5004 × SD - 0.0820	=0.5909 × SD - 0.0827
When the screen aspect ratio is 16:10 Lorsque le rapport d'aspect de l'écran est 16:10 画面アスペクト比 16:10 のとき	=0.5686 × SD - 0.0820	=0.6714 × SD - 0.0827
When the screen aspect ratio is 16:9 Lorsque le rapport d'aspect de l'écran est 16:9 画面アスペクト比 16:9 のとき	=0.5259 × SD - 0.0820	=0.6211 × SD - 0.0827
When the screen aspect ratio is 4:3 Lorsque le rapport d'aspect de l'écran est 4:3 画面アスペクト比 4:3 のとき	=0.6437 × SD - 0.0820	=0.7601 × SD - 0.0827



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